

### **REMARKS**

Claims 13-21, 61 and 62 are now pending in the application. Claims 13-21 stand rejected, withdrawn Claims 1-12 and 22-60 have been cancelled, and Claims 61-68 are new. Applicants respectfully submit support for the amendments to the claims and the new claims can be found in Applicants' specification as filed and does not constitute new matter. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

### **CROSS-REFERENCE TO RELATED OFFICE ACTIONS**

Applicants note that Office Actions issued for the following serial numbers may have related information the Examiner may find useful, as also noted in the concurrently filed Supplemental Information Disclosure Statements:

<u>USSN</u>	<u>Filed</u>	<u>Attorney Docket No.</u>	
10/189,711	07/03/2002	7784-000440/US	(abandoned)
10/397,394	03/26/2003	7784-000440/US/CPA	(abandoned)

Also, we can provide a copy of any Office Actions in these applications, if requested by the Examiner.

### **ELECTION/RESTRICTION**

The undersigned gratefully acknowledges Examiner's acceptance of Applicants' election of the group II invention in our reply filed on September 13, 2005. The undersigned also acknowledges that the Examiner has found it unpersuasive to traverse on the grounds that the Examiner has not shown a separate classification for each group, and has deemed the requirement still proper and made it final.

## **DRAWINGS**

The drawings stand objected to as failing to comply with 37 CFR 184(p)(5) because they did not include the following reference sign(s) mentioned in the description: numeral 52a (p. 21, line 19).

Pursuant thereto, Applicants have attached revised drawings for the Examiner's approval, including a revised Figure 6, which includes reference numeral 52a.

## **SPECIFICATION**

The specification stands objected to regarding the reference to the term "fin" associated with elements 144 (i.e., "cooling fin 144") and 148 (i.e., "catalyst fin 148").

Though the Office Action provides a single and narrow definition of the term, the Applicants do not readily agree with such a limited definition. A "fin" can be a member projecting from a surface, such as a wall portion clearly illustrated in the originally-filed drawings. Also, the fins can define a channel, passage, opening, etc. when placed in series. Applicants have amended the specification to describe a channel; however, one skilled in the art will understand that a channel can be any opening or passage defined by a structure, such as a fin.

Claim 21 has been non-narrowingly amended to overcome the objection thereto.

Therefore, reconsideration and withdrawal of these objections are respectfully requested.

## **CLAIM OBJECTIONS**

Claim 14 stands objected to for certain informalities. Applicants have amended Claim 14 in a non-narrowing manner. Therefore, reconsideration and withdrawal of this

objection are respectfully requested.

### **REJECTION UNDER 35 U.S.C. § 112**

Claims 14-21\* stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Applicants have amended Claims 14 and 21 to overcome these informalities. Therefore, reconsideration and withdrawal of this rejection are respectfully requested.

### **REJECTION UNDER 35 U.S.C. §§ 102 AND 103**

Claim 13 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Furuya et al. (U.S. Pat. No. 4,731,989; hereinafter "Furuya") or Kappler et al. (U.S. Pat. No. 5,003,768; hereinafter "Kappler"). Claim 21 stands rejected under 35 U.S.C. 103(a) as being unpatentable over either Furuya or Kappler in view of Bruck et al. (U.S. Pat. No. 6,619,043; hereinafter "Bruck"). These rejections are respectfully traversed.

At the outset, Applicants note that independent Claim 13 has been amended to now include:

a turbine that is powered by the expanding gases,

said combustion system comprising:

a first fuel supply to supply fuel to the  
compressed atmospheric air;

a heat exchanger comprising a catalyst section  
comprising a catalyst disposed within said catalyst section,

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\* Under the section entitled "Claim Rejections - 35 U.S.C. § 112," the Office Action initially reads, "Claims 14 to 21 are rejected ..."; however the text thereunder only addresses Claims 14 and 21. On January 3, 2006, the Examiner clarified that this rejection refers to Claims 14 to 21; however, inasmuch as Claims 15-20 depend from Claim 14, only Claims 14 and 21 need be revised.

and a cooling tube wherein the compressed air and the fuel flow through said catalyst section and the compressed air flows through the cooling tube; and

a second fuel supply to supply fuel to the compressed atmospheric air after the compressed atmospheric air has passed through said catalyst section.

Applicants respectfully submit that these features as claimed are neither taught nor suggested by either Furuya, Kappler or Bruck, either alone or in combination.

With regard to Furuya, Applicants note that Furuya does not disclose whatsoever a heat exchanger comprising a cooling tube. Furuya further does not disclose a cooling tube through which compressed air flows, as also claimed in Applicants' invention. Moreover, Applicants note that it would be improper to modify Furuya to include either the cooling tube or heat exchanger, as Furuya does not teach or suggest the desirability of this modification. Applicants further note that Furuya does not teach or suggest whatsoever enabling counter-flow of the fuel through the catalyst, as taught in Applicants' application (see at least Figure 5).

Kappler does not remedy the shortcomings of Furuya. At best, Kappler appears to disclose providing compressed air through inlets 26 and 27 (see at least Column 6, Lines 1-5). Kappler does not disclose whatsoever the use of cooling tubes through which the compressed air can flow, as recited in amended Claim 13.

With regard to Bruck, Applicants respectfully submit that it is impermissible to combine Bruck with either Furuya or Kappler, as neither Furuya nor Kappler teach the desirability of providing cooling tubes; and, further, Furuya teaches away from the use of cooling tubes. Applicants further note that Bruck does not teach each of the elements in the presently pending claims, as Bruck does not teach or suggest

whatsoever the use of “a second fuel supply to supply fuel to the compressed atmospheric air,” as presently claimed.

Accordingly, for at least these reasons, Applicants respectfully submit that independent Claim 13 is patentable and in condition for allowance. Furthermore, as Claims 14-21 depend from independent Claim 13, Applicants believe that these claims are also patentable and in condition for allowance.

Reconsideration and withdrawal of this rejection are respectfully requested.

#### **ALLOWABLE SUBJECT MATTER**

The Examiner states that Claims 14 to 21 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. § 112, second paragraph and to include all of the limitations of the base claim and any intervening claims.

Applicants thank the Examiner for this indication of allowable subject matter. However, Applicants have decided to forego such amendments to Claims 14 to 21, but reserve the right to do so, pending the Examiner’s review of the arguments contained herein.

Also, new Claims 61 and 62 include subject matter similar to original Claims 14 and 21 and, as such, should be in condition for allowance.

#### **CONCLUSION**

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office

Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: January 27, 2006

HARNESS, DICKEY & PIERCE, P.L.C.  
P.O. Box 828  
Bloomfield Hills, Michigan 48303  
(248) 641-1600

By: 

Michael L. Taylor, Reg. No. 50,521  
Erica K. Schaefer, Reg. No. 55,861

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### **AMENDMENTS TO THE DRAWINGS**

The attached "Replacement Sheet" of drawings includes changes to Figure 6. The attached "Replacement Sheets," which includes Figures 5B and 6, replaces the original sheet including Figures 5B and 6.

Attachment: one Replacement Sheet (Page 4/8)